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EXAMINER	
HERNANDEZ, NELSON D	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/071,026	AMERSON ET AL.	
	Examiner	Art Unit	
	Nelson D. Hernandez	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *03 October 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-12 and 14-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *2-12 and 14-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 February 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The Examiner acknowledges the amendments on the claims filed on October 3, 2005. Claims 2, 7, 11, 12, 14, 19, 23, 24, 25 and 29-31 have been amended. Claims 1 and 13 have been cancelled.

Response to Arguments

2. In page 8 of the Applicant's remarks filed October 3, 2005, the applicant indicates that the amended claims 7 and 19 have been written including subject matter of claims 1 and 13 respectively, which was indicated to have allowable subject matter and would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims in the previous Office Action. However, claim 7 was dependent from claim 6, claim 6 depends from 5, 5 depends from 4, 4 depends from 2, and 2 depends from 1; and the subject matter of claims 2, 4, 5 and 6 was not found in amended claim 7. In the same manner claim 19 was dependent from claim 18, claim 18 depends from 17, 17 depends from 16, 16 depends from 14 and 14 depends from 13; the subject matter of claims 14, 16, 17 and 18 was not found in amended claim 19. Therefore, the amended claims 7 and 19 do not comply with the Allowable subject matter as indicated in the previous Office Action. The amendments on claims 7 and 19 as presented change the scope of the claimed invention.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 25-29 and 32 are rejected under 35 U.S.C. 102(a) as being anticipated by Melen, US Patent 6,320,979 B1.

Regarding claim 25, claim 25 is written as a Markush type claim by using the expression "... including at least one of lens tilt and lens shift characteristics" (line 8), meeting one species of a genus family anticipates the claimed subject matter. "A generic claim cannot be allowed to an applicant if the prior art discloses a species falling within the claimed genus." The species in that case will anticipate the genus. In re Slayter, 276 F.2d 408, 411, 125 USPQ 345, 347 (CCPA 1960); In re Gosteli, 872 F.2d 1008, 10 USPQ2d 1614 (Fed. Cir. 1989).

Melen discloses an image processing system (Fig. 6), comprising: an image storage device (Fig. 6: 604); at least two similar images contained in the image storage device; a processor (Fig. 6: 602) coupled to the image storage device; a code segment for processing the at least two similar images, where the at least two similar images are combined to form a new image having at least one characteristic different from corresponding characteristics of the at least two images (Fig. 8), the at least one characteristic including lens shift characteristics (since the focus is being performed by shifting the lens shown in figs. 3a: 100

and 3b: 100; see col. 2, line 61 – col. 3, line 44; col. 4, lines 9-26; col. 5, lines 17-53); and an output element for rendering the new image (Image is output to memory in fig. 6: 606) (Col. 2, line 61 – col. 3, line 15; col. 3, line 45 – col. 5, line 3).

Regarding claim 26, Melen teaches that the image processing system can be contained within an image capture device such that the at least two similar images are captured by the image capture device and placed in the image storage device (Col. 4, lines 27-46).

Regarding claim 27, Melen discloses the same as in claim 25. Therefore, grounds for rejecting claim 25 apply here.

Regarding claim 28, Melen discloses that the image storage device for one of the at least two similar images is the image sensor of the image capture device (Col. 2, line 61 – col. 3, line 15; col. 3, line 45 – col. 5, line 3).

Regarding claim 29, Melen discloses that the at least one characteristic includes different depth of field (Col. 2, line 61 – col. 3, line 15; col. 3, line 45 – col. 5, line 3).

Regarding claim 32, Melen discloses that the at least two similar images differ primarily in focus (Col. 2, line 61 – col. 3, line 15; col. 3, line 45 – col. 5, line 3).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 2, 7, 8, 14, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Melen, US Patent 6,320,979 B1 in view of Sato, US Patent 6,525,761 B2 and further in view of Seki, US Patent 6,320,979 B1.

Regarding claim 7, Melen discloses a digital image capture and processing system, comprising: a lens (Figs. 3A: 100 and 3B: 100) coupled to a lens control element (Figs. 3A: 306 and 3B: 306); an image sensor (Figs. 3A: 300 and 3B: 300) configured to capture images from the lens; and a memory element (Fig. 6: 604) and a processor (Fig. 6: 602) coupled to the lens control element, the memory element including image capture software, where the image capture software cause the lens and the image sensor to capture at least two images, each of the at least two images captured using a varying parameter and stored in a memory (Fig. 6: 604), where the at least two images are combined to form a new image having at least one characteristic different from corresponding characteristics of the at least two images (Col. 2, line 61 – col. 3, line 15; col. 3, line 45 – col. 5, line 3).

Melen does not explicitly disclose that the at least two image captured using a varying parameter are stored as a single file and a depth of field indicator

assigned to each of the at least two images, where the depth of field indicator allows a user to determine a depth of field for each of the at least two images.

However, Sato teaches an image capturing system (Fig. 1), wherein the images captured with different conditions are stored as a single file (See figs. 19 and 20) so as to maintain correspondence between said captured images (Col. 8, line 60 – col. 9, line 41).

Therefore, taking the combined teaching of Melen in view of Sato as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Melen by storing the at least two images having different parameters in a single file. The motivation to do would help the digital image capture and processing system to maintain correspondence between related images captured using a varying parameter as suggested by Sato (Col. 8, line 60 – col. 9, line 41).

The combined teaching of Melen in view of Sato fails to teach a depth of field indicator assigned to each of the at least two images, where the depth of field indicator allows a user to determine a depth of field for each of the at least two images.

However, Seki teaches a camera (Fig. 1), comprising an LCD device (Fig. 3: 11), wherein said LCD device displays depth of field information (See fig. 9) for the images being captured by said camera (Page 1, ¶ 0008, ¶ 0010 and ¶ 0019; page 2, ¶ 0034-0036).

Therefore, taking the combined teaching of Melen in view of Sato and further in view of Seki as a whole, it would have been obvious to one of ordinary

skill in the art at the time the invention was made to modify digital image capture and processing system in Melen by displaying the depth of field for every image being captured. The motivation to do so would have been to confirm depth of field in the photographing frame before taking a picture as suggested by Seki (See Seki, Page 2, ¶ 0035).

Regarding claim 2, Melen discloses that the varying parameter is focus distance (Col. 2, line 61 – col. 3, line 15; col. 3, line 45 – col. 5, line 3).

Regarding claim 8, the combined teaching of Melen in view of Sato and further in view of Seki as applied to claim 7 teaches that the user interface includes a depth of field adjustment that allows a user to select the depth of field of the new image from the depth of field of each of the at least two images (by capturing images at with the focusing lens at different positions to create a composed image with enhanced depth of field as taught in Melen, col. 4, lines 9-46 and identifying the depth of filed in the display as taught by Seki, fig. 9, the user would be able to select the new depth of field based on the images being captured). Grounds for rejecting claim 7 apply here.

Regarding claim 19, Melen discloses a method for operating a digital image capture and processing device, the method comprising the steps of: coupling a lens (Figs. 3A: 100 and 3B: 100) to a lens control element (Figs. 3A: 306 and 3B: 306); coupling an image sensor (Figs. 3A: 300 and 3B: 300) to the lens; capturing at least two images, each of the at least two images captured using a varying parameter, where the at least two images are combined to form a new image having at least one characteristic different from corresponding

characteristics of the at least two images (Col. 2, line 61 – col. 3, line 15; col. 3, line 45 – col. 5, line 3).

Melen does not explicitly disclose storing the at least two images as a single file; assigning a depth of field indicator to each of the at least two images; and determining a depth of field for each of the at least two images.

However, Sato teaches an image capturing method and system (Fig. 1), wherein the images captured with different conditions are stored as a single file (See figs. 19 and 20) so as to maintain correspondence between said captured images (Col. 8, line 60 – col. 9, line 41).

Therefore, taking the combined teaching of Melen in view of Sato as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Melen by storing the at lest two images having different parameters in a single file. The motivation to do would help the digital image capture and processing system to maintain correspondence between related images captured using a varying parameter as suggested by Sato (Col. 8, line 60 – col. 9, line 41).

The combined teaching of Melen in view of Sato fails to teach assigning a depth of field indicator to each of the at least two images; and determining a depth of field for each of the at least two images.

However, Seki teaches a camera (Fig. 1), comprising an LCD device (Fig. 3: 11), wherein said LCD device displays depth of field information (See fig. 9) for the images being captured by said camera (Page 1, ¶ 0008, ¶ 0010 and ¶ 0019; page 2, ¶ 0034-0036).

Therefore, taking the combined teaching of Melen in view of Sato and further in view of Seki as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method in Melen by displaying the depth of field for every image being captured and determining a depth of field for every image being captured. The motivation to do so would have been to confirm depth of field in the photographing frame before taking a picture as suggested by Seki (See Seki, Page 2, ¶ 0035).

Regarding claim 14, Melen discloses that the varying parameter comprises focus distance (Col. 2, line 61 – col. 3, line 15; col. 3, line 45 – col. 5, line 3).

Regarding claim 20, the combined teaching of Melen in view of Sato and further in view of Seki as applied to claim 19 teaches using a depth of field adjustment to select the depth of field of the new image from the depth of field of each of the at least two images (by capturing images at with the focusing lens at different positions to create a composed image with enhanced depth of field as taught in Melen, col. 4, lines 9-46 and identifying the depth of filed in the display as taught by Seki, fig. 9, the user would be able to select the new depth of field based on the images being captured). Grounds for rejecting claim 19 apply here.

7. Claims 3-6, 9, 10, 15-18, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Melen, US Patent 6,320,979 B1 and Sato, US Patent 6,525,761 B2 in view of Seki, US Patent 6,320,979 B1 and further in view of Fredlund, US 2003/0128287 A1.

Regarding **claim 3**, the combined teaching of Melen in view of Sato and further in view of Seki does not teach a user interface associated with the image capture software, where the user interface allows the user of the device to scroll through the at least two images and select one of the images as the new image.

However, Fredlund teaches a system and camera (Fig. 1) that capture a plurality of images capture with different parameters and stores them in a memory (Fig. 1: 324), whereby using an interface (Fig. 3: 360), the user is able to scroll through the captured images and select one or more of said captured images to create a composed image (Page 2, ¶ 0021-0022; page 3, ¶ 0031 and ¶ 0034; page 4, ¶ 0035).

Therefore, taking the combined teaching of Melen and Sato in view of Seki and further in view of Fredlund as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the digital image capture and processing system by having an interface to scroll through the captured images and select one or more of said captured images to create a composed image. The motivation to do so would have been to select the preferred images to be composed into a new image as suggested by Fredlund (Page 3, ¶ 0031 and ¶ 0034).

Regarding claim 4, the combined teaching of Melen in view of Sato and further in view of fails to teach a user interface associated with the image capture software, where the user interface allows the user to combine attributes of the at least two images to form the new image.

However, Fredlund teaches a system and camera (Fig. 1) that capture a plurality of images capture with different parameters and stores them in a memory (Fig. 1: 324), whereby using an interface (Fig. 3: 360), the user is able to scroll through the captured images and select one or more of said captured images to create a composed image (Page 2, ¶ 0021-0022; page 3, ¶ 0031 and ¶ 0034; page 4, ¶ 0035).

Therefore, taking the combined teaching of Melen and Sato in view of Seki and further in view of Fredlund as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the digital image capture and processing system by having an interface to scroll through the captured images and select one or more of said captured images to create a composed image. The motivation to do so would have been to select the preferred images to be composed into a new image as suggested by Fredlund (Page 3, ¶ 0031 and ¶ 0034).

Regarding claim 5, the combined teaching of Melen and Sato in view of Seki and further in view of Fredlund as applied to claim 4 teaches that the user interface allows the different focus of each of the at least two images to be blended into the new image that includes an apparent focus between the two focus distances (See Melen, col. 2, line 61 – col. 3, line 15; col. 3, line 45 – col. 5, line 3).

Regarding claim 6, Melen discloses a lens position indicator configured to indicate the position of the lens for each of the at least two images (Melen teaches calculating the position of the lens by using the contrast in the image

data obtained, and also calculates the focus distance using the same); a focus determination element configured to analyze each of a plurality of regions associated with each of the at least two images, the focus determination element also configured to determine whether each of the plurality of regions are in focus (See Fig. 8); and where the image capture software assembles each of the in-focus regions into the new image (Col. 4, line 47 – col. 6, line 21).

Regarding claim 9, the combined teaching of Melen in view of Sato and further in view of Seki teaches a distance indicator assigned to each of the regions, the distance indicator configured to assign a distance measurement to an alpha channel for each region (In fig. 8, Seki teaches that the displayed image being captured can be divided in different areas and display information such as brightness, distance information and auto-focus information on each of said areas; page 2, ¶ 0034).

Regarding claim 10, the combined teaching of Melen in view of Sato and further in view of Seki fails to teach the user interface further comprises a lens shift and an image plane tilt adjustment.

However, Official Notice is taken that interfaces for adjusting lens shift and image plane tilt of a camera is notoriously well known in the art and it would have been obvious to one of ordinary skill in the art to have the digital image capture and processing system in Melen to have the interface performing lens shift and an image plane tilt adjustment. The motivation to do so would have been to better adjust the region of interest to be photographed of the different images to be used for composing the enhanced depth of field image.

Regarding claim 15, the combined teaching of Melen in view of Sato and further in view of Seki fails to teach scrolling through the at least two images; and selecting one of the images as the new image.

However, Fredlund teaches a system and camera (Fig. 1) that capture a plurality of images capture with different parameters and stores them in a memory (Fig. 1: 324), whereby using an interface (Fig. 3: 360), the user is able to scroll through the captured images and select one or more of said captured images to create a composed image (Page 2, ¶ 0021-0022; page 3, ¶ 0031 and ¶ 0034; page 4, ¶ 0035).

Therefore, taking the combined teaching of Melen and Sato in view of Seki and further in view of Fredlund as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the digital image capture and processing system by having an interface to scroll through the captured images and select one or more of said captured images to create a composed image. The motivation to do so would have been to select the preferred images to be composed into a new image as suggested by Fredlund (Page 3, ¶ 0031 and ¶ 0034).

Regarding claim 16, the combined teaching of Melen in view of Sato and further in view of Seki fails to teach combining attributes of the at least two images to form the new image.

However, Fredlund teaches a system and camera (Fig. 1) that capture a plurality of images capture with different parameters and stores them in a memory (Fig. 1: 324), whereby using an interface (Fig. 3: 360), the user is able to

scroll through the captured images and select one or more of said captured images to create a composed image (Page 2, ¶ 0021-0022; page 3, ¶ 0031 and ¶ 0034; page 4, ¶ 0035).

Therefore, taking the combined teaching of Melen and Sato in view of Seki and further in view of Fredlund as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the digital image capture and processing system by having an interface to scroll through the captured images and select one or more of said captured images to create a composed image. The motivation to do so would have been to select the preferred images to be composed into a new image as suggested by Fredlund (Page 3, ¶ 0031 and ¶ 0034).

Regarding claim 17, the combined teaching of Melen and Sato in view of Seki and further in view of Fredlund teaches that the blending each of the at least two images into the new image that includes an apparent focus between the focus distance of each of the at least two images (See Melen, col. 2, line 61 – col. 3, line 15; col. 3, line 45 – col. 5, line 3).

Regarding claim 18, Melen discloses indicating the position of the lens for each of the at least two images (Melen teaches calculating the position of the lens by using the contrast in the image data obtained, and also calculates the focus distance using the same); dividing each of the at least two images into a plurality of regions (See Fig. 8); analyzing each of the regions to determine whether each of the plurality of regions are in focus (This is made by analyzing

the contrast on each region); and assembling each of the in-focus regions into the new image (Col. 4, line 47 – col. 6, line 21).

Regarding claim 21, the combined teaching of Melen in view of Sato and further in view of Seki teaches assigning a distance indicator to each of the regions, the distance indicator configured to assign a distance measurement to an alpha channel for each region (In fig. 8, Seki teaches that the displayed image being captured can be divided in different areas and display information such as brightness, distance information and auto-focus information on each of said areas; page 2, ¶ 0034).

Regarding claim 22, the combined teaching of Melen in view of Sato and further in view of Seki fails to teach adjusting lens shift and image plane tilt.

However, Official Notice is taken that adjusting lens shift and image plane tilt of a camera is notoriously well known in the art and it would have been obvious to one of ordinary skill in the art to have the digital image capture and processing system in Melen to have the interface performing lens shift and an image plane tilt adjustment. The motivation to do so would have been to better adjust the region of interest to be photographed of the different images to be used for composing the enhanced depth of field image.

8. Claims 11 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Melen, US Patent 6,320,979 B1 and Sato, US Patent 6,525,761 B2 in view of Seki, US Patent 6,320,979 B1 and further in view of Ockman, US Patent 6,816,627 B2.

Regarding claim 11, the combined teaching of Melen in view of Sato and further in view of Seki fails to teach that a first of the at least two images is captured using conventional photography and a second of the at least two images is captured using infrared photography.

However, Ockman teaches a system for composing images wherein at least one of the images is taken using visible light and the other is taken using infrared exposure (Col. 7, lines 21-61).

Therefore, taking the combined teaching of Melen and Sato in view of Seki and further in view of Ockman as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the digital image capture and processing system by composing images taken using visible light with images taken using infrared exposure. The motivation to do so would have been to create composite image simultaneously displaying all of the pertinent information of the original image as suggested by Ockman (Col. 3, lines 32-53).

Regarding claim 23, the combined teaching of Melen in view of Sato and further in view of Seki fails to teach capturing a first of the at least two images using conventional photography; and capturing a second of the at least two images using infrared photography.

However, Ockman teaches a system for composing images wherein at least one of the images is taken using visible light and the other is taken using infrared exposure (Col. 7, lines 21-61).

Therefore, taking the combined teaching of Melen and Sato in view of Seki and further in view of Ockman as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the digital image capture and processing system by composing images taken using visible light with images taken using infrared exposure. The motivation to do so would have been to create composite image simultaneously displaying all of the pertinent information of the original image as suggested by Ockman (Col. 3, lines 32-53).

9. Claims 12 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Melen, US Patent 6,320,979 B1 and Sato, US Patent 6,525,761 B2 in view of Seki, US Patent 6,320,979 B1 and further in view of Cesana, US Patent 6,466,220 B1.

Regarding claim 12, the combined teaching of Melen in view of Sato and further in view of Seki fails to teach that the varying parameter comprises the number of bits used by each pixel in the image sensor.

However, Cesana teaches a method for combining images having different bits per pixel so as to create a new image with a common data format (Col. 4, line 21 – col. 5, line 10).

Therefore, taking the combined teaching of Melen and Sato in view of Seki and further in view of Cesana as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the digital image capture and processing system by composing images having different bits per pixels to create a new image with a common data format. The motivation to

do so would have been to capture and processing system to simultaneously display several graphic regions with different color formats in the composed image as suggested by Cesana (Col. 1, lines 25-48).

Regarding claim 24, the combined teaching of Melen in view of Sato and further in view of Seki fails to teach varying the number of bits used by each pixel in the image sensor.

However, Cesana teaches a method for combining images having different bits per pixel so as to create a new image with a common data format (Col. 4, line 21 – col. 5, line 10).

Therefore, taking the combined teaching of Melen and Sato in view of Seki and further in view of Cesana as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the digital image capture and processing system by composing images having different bits per pixels to create a new image with a common data format. The motivation to do so would have been to simultaneously display several graphic regions with different color formats in the composed image as suggested by Cesana (Col. 1, lines 25-48).

10. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Melen, US Patent 6,320,979 B1 in view of Takahashi, US 2002/007144 A1.

Regarding claim 30, Melen does not explicitly disclose that the at least one characteristic includes different exposure.

However, Takahashi teaches a method of producing a video recording with improved dynamic range comprising: providing a video sensor (Fig. 1: 103) capable of converting an optical image into a video signal comprising a sequence of video fields or frames (See fig. 3) representing the optical image (Page 2, ¶ 0045); operating said video sensor to capture an optical image and simultaneously varying the amount of light (Page 6, ¶ 0072) received by said video sensor during the time frame of each video field or frame so that the resulting video signal representing said captured optical image will constitute a sequence of video fields or frames comprising at least first and second fields or frames representing substantially different exposure values of the captured image occurring repetitively in said sequence (Page 3, ¶ 0050; page 6, ¶ 0072).

Therefore, taking the combined teaching of Melen in view of Takahashi as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Melen by capturing images with different exposure. The motivation to do so would have been to increase the dynamic range of the images as suggested by Takahashi (Page 2, ¶0020).

11. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Melen, US Patent 6,320,979 B1 in view of Brooksby, US 2003/0117412 A1.

Regarding claim 31, Melen does not explicitly disclose that the at least one characteristic includes different exposure.

However, Brooksby teaches a method of composing images having different illumination levels to create a new image avoiding the use of pixels too

dark or too bright so as to extend the dynamic illumination range of an imaging system by generating a high dynamic illumination range floating-point representation of the image (Page 1, ¶ 0016; page 2, ¶ 0017-0022).

Therefore, taking the combined teaching of Melen in view of Brooksby as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the digital image capture and processing system by composing images having different illumination levels to create a new image. The motivation to do so would have been to extend the dynamic illumination range of an imaging system by generating a high dynamic illumination range floating-point representation of the image by avoiding the use of pixels too dark or too bright as suggested by Brooksby (Page 1, ¶ 0016; page 2, ¶ 0017-0022).

12. Claims 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Melen, US Patent 6,320,979 B1 in view of Ockman, US Patent 6,816,627 B2.

Regarding claim 33, Melen does not explicitly disclose that at least two similar images differ primarily in color.

However, Ockman teaches a system for composing images wherein at least one of the images is taken using visible light colors and the other is taken using only infrared color component (Col. 7, lines 21-61).

Therefore, taking the combined teaching of Melen in view of Ockman as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the digital image capture and processing

system by composing images taken using different color components. The motivation to do so would have been to create composite image simultaneously displaying all of the pertinent information of the original image as suggested by Ockman (Col. 3, lines 32-53).

Regarding claim 34, Melen does not explicitly disclose that a first of the at least two similar images is captured using visible light and the second of the at least two similar images is captured using infrared exposure.

However, Ockman teaches a system for composing images wherein at least one of the images is taken using visible light and the other is taken using infrared exposure (Col. 7, lines 21-61).

Therefore, taking the combined teaching of Melen in view of Ockman as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the digital image capture and processing system by composing images taken using visible light with images taken using infrared exposure. The motivation to do so would have been to create composite image simultaneously displaying all of the pertinent information of the original image as suggested by Ockman (Col. 3, lines 32-53).

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ludwig et al. (US Patent 6,667,761 B1) teaches the use of an interface for controlling the camera functions such as pan, tilt and lens shifting for zooming

(See col. 3, lines 42-57; col. 4, lines 17-35; col. 6, lines 50-57; col. 7, lines 22-34).

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Since amended claims 7 and 19 as presented change the scope of the claimed invention as explained in paragraph 2. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nelson D. Hernandez whose telephone number is (571) 272-7311. The examiner can normally be reached on 8:30 A.M. to 6:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ngoc Yen Vu can be reached on (571) 272-7320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nelson D. Hernandez
Examiner
Art Unit 2612

NDHH
December 22, 2005

TUAN HO
PRIMARY EXAMINER